

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (original): A method for processing bioresponse signals coming from organisms living in a well-defined living space, which are each comprised in a microenvironment, wherein these signals are obtained in online measuring of bioresponse variables, and wherein these signals are at least real-time processed in a signal processor, wherein, on the one hand, these organisms are monitored in the said microenvironments, and wherein, on the other hand, these variables can be adjusted by corresponding signal control apparatuses in accordance with a living space control model, characterized in that the living space comprises an incubator for hatching out hatching eggs, wherein the bioresponse variables are measured and controlled in a physical and/or chemical manner, for instance in the form of optical, electrical, magnetic, acoustic or mechanical bioresponse signals, or combinations thereof.

Claim 2. (original): A method according to claim 1, characterized in that the bioresponse signals are non-invasively measured.

Claim 3. (currently amended): A method according to claim 1 ~~or~~ 2, characterized in that the bioresponse signals for hatching eggs are chosen from, for instance, but not exclusively, eggshell temperature, weight loss, pulse, blood pressure, respiration, growth, growth rate, activity, heat production, moisture production, and sound production.

Claim 4. (currently amended): A method according to claim 1, ~~2 or~~ 3, characterized in that the bioresponse signals for hatching eggs in the said microenvironments are chosen from, for instance, but not exclusively, temperature, gas concentrations, sound intensity and sound frequency.

Claim 5. (currently amended): A method according to claim 1 ~~any one of the preceding claims~~, characterized in that the living space control model comprise an intelligent control algorithm for a process control based on a systematic or mathematical processing rule, for instance, but not exclusively, a so-called model-based control with prediction, or a process control with so-called fuzzy logic.

Claim 6. (currently amended): A method according to claim 1 ~~any one of the preceding claims~~, characterized in that the living space control model controls the hatching out according to directions obtained and determined after expertise.

Claim 7. (original): A method for hatching out hatching eggs, in particular for regulating the climate conditions in an incubator during the hatching process, including the setting, the measuring and the monitoring, as well as the adjusting of gas concentrations and climate parameters such as air temperature, air humidity, carbonic acid content, and oxygen content, and further the measuring of egg temperatures of at least a number of hatching eggs, characterized in that

the method successively comprises the following steps:

- entering a hatching egg target temperature T_{ep} into the control at the start of the hatching process;
- measuring the egg temperature T_e at a determined point in time after the start;
- comparing the measured T_e and T_{ep} , wherein, in the case of a difference between T_e and T_{ep} , an air temperature signal for adjusting the air temperature T_a according to an air temperature regulation is delivered; and
- repeating these steps during the hatching process at a determined next point in time.

Claim 8. (original): A method according to claim 7, characterized in that the air temperature regulation for adjusting the air temperature T_a successively comprises the following steps:

- entering an air target temperature T_{ap} into the control at the start of the hatching process, wherein, further, an air temperature control range A is entered between limit temperatures $T_{ap}(\min)$ and $T_{ap}(\max)$, with $T_{ap}(\min) < T_{ap} < T_{ap}(\max)$;
- measuring the air temperature T_a at a determined point in time after the start;
- comparing the measured T_a with the temperatures in A, wherein, in the case that T_a has increased or decreased by a predetermined difference, the air temperatures are adjusted according to a determined control scheme; and
- repeating these steps during the hatching process at a determined next point in time.

Claim 9. (original): A method according to claim 8, characterized in that it is further comprised that, when the air temperature T_a exceeds one of the limit temperatures of A, an alarm signal is delivered.

Claim 10. (currently amended): A method according to claim 7 ~~any one of claims 7-9~~, characterized in that the egg temperature is contactlessly measured.

Claim 11. (currently amended): A method according to claim 10, characterized in that the egg temperatures are measured with an apparatus for measuring, with infrared thermometers, temperatures of hatching eggs placed in nests of hatching trays which are arranged in an incubator, wherein, for a preselected number of trays, the temperature is measured of a predetermined number of eggs, characterized in that during the hatching period, each individual thermometer contactlessly measures the temperature of a corresponding individual egg according to a pre-entered measurement scheme, wherein the measuring signals obtained control a temperature control regulation according to any one of claims 12-14.

Claim 12. (currently amended): An apparatus for measuring, with infrared thermometers, temperatures of hatching eggs placed in nests of hatching trays which are arranged in an

incubator, wherein, for a preselected number of trays, the temperature is measured of a predetermined number of eggs, characterized in that during the hatching period, each individual thermometer contactlessly measures the temperature of a corresponding individual egg according to a pre-entered measurement scheme, wherein the measuring signals obtained control a ~~an~~ temperature control regulation.

Claim 13. (original): An apparatus according to claim 12, characterized in that the thermometers have been provided on holders which are placed on the hatching trays between the eggs, by means of which the temperatures of at least two individual hatching eggs are measured.

Claim 14. (currently amended): An apparatus according to claim 12 ~~any one of claims 12 or 13~~, characterized in that the apparatus further comprises a robot to automatically position the holders near the hatching eggs.

Claim 15. (currently amended): An apparatus according to claim 12 ~~any one of claims 12-14~~, characterized in that the apparatus is used for carrying out a the method for processing bioresponse signals coming from organisms living in a well-defined living space, which are each comprised in a microenvironment, wherein these signals are obtained in online measuring of bioresponse variables, and wherein these signals are at least real-time processed in a signal processor, wherein, on the one hand, these organisms are monitored in the said microenvironments, and wherein, on the other hand, these variables can be adjusted by corresponding signal control apparatuses in accordance with a living space control model, characterized in that the living space comprises an incubator for hatching out hatching eggs, wherein the bioresponse variables are measured and controlled in a physical and/or chemical manner, for instance in the form of optical, electrical, magnetic, acoustic or mechanical bioresponse signals, or combinations thereof ~~according to any one of claims 1-11~~.